



Minimum Standards for the Initiation, Evaluation and Management of Insulin Pump Therapy

Introduction

The delivery of insulin through subcutaneous insulin infusion is a therapeutic option for patients with type 1 diabetes and selected patients with type 2 diabetes. The application of this technology has been shown to facilitate attaining glucose targets while decreasing hypoglycemia. Successful pump therapy requires careful training and monitoring of the patient by an experienced insulin pump management team.

Initiation of therapy

- Insulin pump therapy should only be ordered by a physician and managed by a team who is experienced in adjusting multi-dose insulin regimens and insulin pumps. The team should include a physician, diabetes educators, dietitians and other healthcare professionals who are experienced in insulin pump therapy.
- Physicians should have experience in initiation and management of insulin pump therapy. This should include structured training in insulin pump therapy (e.g. fellowship training, Endocrine University[®] course, continuing education programs) and mentored management of patients already established on pump therapy.

Evaluation of the patient prior to initiation of therapy

Appropriate patient selection is essential as not all patients are good candidates for insulin pump therapy.

Evaluation of the potential pump patient or his/her support system should include assessment of:

- ability to manage a pump program
- ability and willingness to frequently check his/her glucose, whether with fingerstick glucose monitoring alone and/or combined with a continuous glucose sensor
- ability to count carbohydrates
- ability to adjust insulin doses based on carbohydrate content of meal
- ability to identify changes in insulin needs due to changes in physical activity and food intake
- ability to recognize, troubleshoot and manage hyperglycemia and hypoglycemia

Standards for management after initiating insulin pump therapy

- The team must have a member that is experienced in managing and troubleshooting insulin pump therapy on call 24 hours a day
- The team must be able to assess the patient frequently during the first six weeks of insulin pump therapy
- The team must reassess the patient or his/her support system for continued appropriateness for insulin pump therapy as outlined above
- The team must evaluate the patient's ability to use the device at least every three months. Skills to be assessed include the patient or his/her support system demonstrating:
 - ability to navigate the pump to view current settings
 - ability to make changes in his/her preset program in response to changes in daily routine and physical activity
 - ability to troubleshoot unexpected blood sugars
 - ability to use basal/bolus therapy as an alternative if needed

REFERENCES

- Colquitt JL, Green C, Sidhu MK, Hartwell D, Waugh N. Clinical and cost-effectiveness of continuous subcutaneous insulin infusion for diabetes. *Health Technol Assess* 2004 Oct;8(43):iii, 1-171.
- Pickup J, Mattock M, Kerry S. Glycaemic control with continuous subcutaneous insulin infusion compared with intensive insulin injections in patients with type 1 diabetes: meta-analysis of randomized controlled trials. *BMJ* 2002;324(7339):705-10.
- Raskin P, Bode BW, Marks JB, et al. Continuous subcutaneous insulin infusion and multiple daily injection therapy are equally effective in type 2 diabetes: a randomized, parallel-group, 24-week study. *Diabetes Care* 2003;26(9):2598-603.
- Retnakaran R, Hochman J, Devries JH, et al. Continuous subcutaneous insulin infusion versus multiple daily injections: the impact of baseline A1c. *Diabetes Care* 2004;27:2590-96.